Long-term effects of large and small herbivores on plant diversity in a salt-marsh system

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Propositions

Accompanying the dissertation

Long-term effects of large and small herbivores on plant diversity in a salt-marsh system

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1. Long-term management is needed for conserving plant diversity in some naturally developed salt marshes (Chapter 2).

2. Low-moderate densities (usually relative to the productivity of the site) of large domestic herbivores, or wild ones, would play a positive role in conserving plant diversity in the long term in grasslands (Chapter 3).

3. Long-term non-trophic effects of large herbivores on plant diversity are underestimated. Non-trophic effects (e.g. trampling, deposition of urine and dung) of large herbivores increased over time, exceeding that of trophic effects (aboveground biomass consumption) 23 years after the start of the experiment in a salt marsh (Chapter 3).

4. Livestock (e.g. dairy cows) are increasingly being kept indoors (Mandel *et al.* 2016), fed by mown grasses and crops. Grasslands are mowed or converted to croplands, in which non-trophic effects of large herbivores have been removed, which has, at least, contributed to the decline in plant diversity (O'Mara 2012; Tscharntke *et al.* 2012; Chapter 3).

5. Small herbivores can have a strong and long-lasting impact on plant diversity, but it highly depends on their abundance, which in turn depends on the quality and abundance of forage plants (Chapter 4).

6. Grazing may lead to increased homogeneity in genetic population structure at the landscape scale (Smith *et al.* 2009; Chapter 5).

7. People should not only complain what they want to but cannot have, but also fight for it.

8. It is not the most intellectual of the species that survives; it is not the strongest that survives; but the species that survives is the one that is able best to adapt and adjust to the changing environment in which it finds itself (Leon C. Megginson).